

## **SECTION 00869**

# **CONCRETE SLAB JACKING** **(Cement Grout)**

## **PART 1 GENERAL**

### **1. SECTION INCLUDES**

- A. Raise and support a failed section of concrete pavement back to an acceptable grade for a suitable ride by injection of product.

### **1.2 RELATED SECTIONS**

- A. Section 01554: Traffic Control.

### **1.3 REFERENCES**

- A. ASTM C 618 Class F: Standard Specification for Fly Ash and Raw or Calcined Natural Pozzolan for use as a Mineral Admixture in Portland Cement Concrete.
- B. ASTM D 790: Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- C. ASTM C1107: Standard Specification for Packaged Dry, Hydraulic-Cement Grout (Nonshrink).

### **1.4 QUALITY ASSURANCE**

- A. Obtain approval of injection material properties prior to placement from the Engineer.
- B. Provide copies of invoices from mix suppliers to the Engineer.

### **1.5 WARRANTY**

- A. Supplier warrants all materials and workmanship for a period of one year against shrinkage or deterioration.
- B. Supplier replaces by re-injection or slab replacement any material that fails during the warranty period.

## **1.6 PAYMENT PROCEDURES**

- A. Accepted injected quantities paid for at the contract unit price per cubic foot.

## **PART 2 PRODUCTS**

### **2.1 PORTLAND CEMENT DRY MIX DESIGN**

- A. Use standard mix design for jacking and grouting slabs with voids less than 3 inches as follows:
  - 1. 1 part (by volume) Portland Cement Type I or II.
  - 2. 3 parts (by volume) pozzolan (natural or artificial).
- B. Use optional mix design for jacking and grouting slabs with voids greater than 3 inches as follows:
  - 1. 1 part (by volume) Portland Cement Type I or II.
  - 2. 1 part (by volume) pozzolan (natural or artificial).
  - 3. 2 parts (by volume) clean sand.
- C. Obtain Engineer's approval for any deviation from dry mix proportions of mix design including addition of liquefier and/or water reducing agents.
- D. Adjust water content to meet local conditions

### **2.2 EQUIPMENT**

- B. Equipment capable of supplying a homogenous product at the appropriate rate.
- B. Certified scales or measuring devices to measure delivered product and to proportion product components.
- B. Concrete drill or saw capable of producing circular holes of adequate size for the application type.
- B. Elevation measuring devices with an accuracy of 0.01 ft.
- B. Concrete saw capable of cutting joints between failed and non-failed slabs.

## **PART 3 EXECUTION**

### **3.1 PREPARATION**

- B. Establish a finish target profile of pavement using elevation measuring device or string lines.
- B. Saw-cut joints between failed and non-failed slabs as necessary to prevent damage to non-failed slabs.

## **3.2 INSTALLATION**

- B. Drill holes as determined in roadway slab.
- B. Inject product to evenly raise slab to finished grade profile.
- B. Fill injection holes with at least 4 inches of non-shrink grout.
- D. Final grade after jacking must be within  $\pm 1/8$  inch of finished grade profile.

END OF SECTION

#### **REVISION HISTORY**

**Converted to MS Word - May 20, 2004**